Ageing, childhood, and social identity in the Early Neolithic of Central Europe

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Ageing, Childhood and Social Identity in the Early Neolithic of Central Europe

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In this paper, osteological and archaeological data are brought together to further our understanding of childhood in the early Neolithic Linearbandkeramik culture (LBK; c.5500–5000 cal BC). Understanding how conceptions of aging and how bodies were modified over the life-course can help to provide greater explanatory range for archaeological phenomena. Yet, in many characterizations of LBK society, fixed representations of sex or identities based on subsistence strategies pervade, with children rarely considered and then only as a specialized and separate topic of study. As a challenge to this view, a summary of the current models of childhood in the LBK are presented and debated with reference to the burial rites of children. A period of 'middle' childhood is proposed for the LBK. Osteological evidence suggests that childhood could be a time of dietary stress, perhaps with sex-based differences from childhood, and examples of the diseases and traumas suffered are discussed. Finally, the possibility that children were actively contributing to acts of personal violence is raised. While the recognition of identity-making as a continuous process remains a powerful

exploratory route to investigating prehistoric societies, we argue that this should not discourage us from seeing identity as formed over the entire life-course.

Keywords: childhood, ageing, life-course, Neolithic, Lindearbandkeramik, health, burial practices

Introduction

In this paper, the skeletal and burial assemblages from the early Neolithic *Linearbandkeramik* culture (LBK, *c*.5500–5000 cal BC; see Figure 1; Gronenborn, 1999) form the focus for a discussion of childhood in the LBK. Children have tended to be under-represented in osteological analyses of archaeological populations, and by extension archaeological studies, both because of taphonomic reasons (Andrews & Bello, 2006; Bello et al., 2006) and research focus (Lewis, 2011: 4; Fibiger, 2014). Nonetheless, the last two decades have seen sustained interest in recapturing notions and experiences of childhood in the past, and in the significant contribution immature individuals would have made to their communities (Sofaer Derevenski, 1997; Sofaer, 2000; Baxter, 2005, 2008). Importantly, the complex relationship between biological and social age has been debated and shown to vary culturally and over time (Halcrow & Tayles, 2008, 2011). Chronological age in the past may not have carried the significance it does today; in the West, eighteen is a legal threshold largely passed irrespective of the physical development and capacity of the individual (Lucy, 2005). While childhood is a dynamic period of life, with enormous physical and mental changes taking place, how such biological processes are drawn on in identity production across the life-course can vary between different social groups and we hold that investigating the parameters in which childhood took place in past societies can provide important insights into identity

formation for that culture as a whole (Sofaer, 2000; Baxter, 2005, 2008). This contribution will by no means encompass all the issues pertaining to childhood and the body in LBK contexts, but is envisaged as a move towards thinking about how issues of health, sex and physical capacity were bound up with the social elaboration of identity at this time.

We became interested in LBK childhood over the course of our involvement in two projects; both authors in the multi-disciplinary project *The First Farmers of Central Europe: Diversity in LBK Lifeways* (Bickle & Whittle, 2013) and one (Fibiger) during research for a project entitled *Skeletal Evidence for Interpersonal Violence in the Neolithic of Northwest Europe* (Schulting & Fibiger, 2012; Fibiger et al., 2013). In the first project, strontium isotopic ratios suggested that particular social contexts experienced during childhood were informing burial rites in later life; specifically males buried with polished stone adzes — a grave good almost exclusively found with skeletons sexed as male — were shown to have narrower ranges of strontium isotope ratios than those without (Bentley et al., 2012; Bentley, 2013; Hedges et al., 2013). As the strontium isotope ratios are measured in tooth enamel, which mineralizes in childhood (Bentley, 2006), this suggests a connection between the childhood diet of some males and the kinds of funerary rites they received in adulthood. This raised questions not only of descent and kinship patterns in the LBK (Whittle & Bickle, 2013), but also of how identity in later life could have been embedded at much younger ages. In the case of the second project, children were found to have suffered traumas that were likely to have originated in violent acts and suggest their involvement in personal combat (Schulting & Fibiger, 2012; Fibiger et al., 2013; Fibiger, 2014), challenging previous assumptions about the participation of children in violence and encouraging greater attention to the contribution of children to their communities. Both of these projects inspired the two key questions asked in this paper: we wanted, firstly, to investigate the status and changing

treatments of childhood in the LBK burial record as they aged, and, secondly, through the skeletal assemblage, to consider how health may have shaped the early years of life. Together, these two lines of inquiry contribute to our sense that childhood was an important time for the conception and experience of identity formation during the LBK, but that there was not necessarily a straightforward progression to adulthood.

Embodied Identities in the LBK

Although the past body is most recognizable in the skeleton, it is, of course, not alone in identity production and the role of landscape, animals, architecture and items of material culture are just some of the influences acknowledged and demonstrated both archaeologically and anthropologically (Gell, 1998; Ingold, 2000; Hamilakis et al., 2002; Borić & Robb, 2008). Varied and dispersed bodies now routinely populate archaeological discourse on different time periods, allowing us to capture something of the diversity of human embodiment (Robb & Harris, 2013). As such, it becomes challenging to 'fence off a "body subject"' (Hofmann & Whittle, 2008: 303) that solely details corporeality and that does not attend to a whole host of broader themes pertaining to cultural change and transmission, social relations and institutions, and the production and maintenance of identity.

Yet, in the context of the LBK, the role of the physical body itself in the construction of identity has perhaps previously been a neglected topic (though this is changing, e.g. Hofmann & Whittle, 2008; Hofmann, 2012, in press). Rather static and categorical notions of identity have arisen in the two, largely separate, ways this concept has been studied: the longhouse and in burial contexts (Whittle, 2012). On the scale of the individual, gender has dominated discussion with particular images of male and female identity characterized largely from burial practices and analysis of the mortuary record (Modderman, 1988;

Jeunesse, 1997; Sommer, 2001; Hofmann, 2009), though with some significant discussion of how identity may have changed over the life-course (Jeunesse, 1997; Siemoneit, 1997; Zvelebil & Pettitt, 2008; Hofmann, 2009). However, it is often the longhouse that has been the focus for social models, whether through discussing the layout of settlements (Rück, 2007, 2009) or through seeing the 'household' as the fundamental unit of community organization (e.g. Modderman, 1988; Strien, 2005; *cf*. Hofmann & Bickle, 2011: 186–87). Although extensive discussion of Lévi-Strauss's (1982) *House Societies* has not taken place in this context (though see notable exceptions: Borić, 2007, 2008; Whittle, 2012), the longhouse is thus often characterized as one of the primary loci of agency for LBK societies and, while household size has been debated (e.g. Lüning & Stehli, 1989), investigating the relationships that constituted it, particularly in terms of membership by different or varied individuals, has proved more challenging (Coudart, 1998; Hachem, 2011; Whittle & Bickle, 2013).

The oft-quoted relative lack of variability across the LBK distribution in material culture, architecture and – by extension – daily practice, has encouraged the view that households acted as one body rather than in more distributed fashions (Modderman, 1988; Sommer, 2001; *cf*. Coudart, 1998; Hachem, 2011; Hofmann, 2012). The degree of uniformity may be somewhat overstated: increased regionalization is acknowledged not only for the second phase of the LBK, from 5300 cal BC (sometimes termed 'Flombornization'), but has also been demonstrated for its earlier phases as well (Modderman, 1988; Lenneis, 2004; Strien, 2005; Oross & Bánffy, 2009). As wide-spread uniformity has previously been the default position in LBK studies, variation is most frequently explained in terms of dominant or deviant practice (*cf*. Hofmann, 2009, in press; Bickle et al., 2011; Pechtl & Hofmann, 2013). Set against the background of the Mesolithic-Neolithic transition, the LBK is then

often studied through the lens of identifying evidence for fully agriculture-practising farmers ('true' LBK) and semi-settled, partially domesticated, hunter-gatherers ('less' LBK; Robb & Miracle, 2007; Bickle et al., 2011; Hofmann & Bickle, 2011). This approach has informed much interpretation of the LBK, with particular categories, such as 'farmer' or 'hunter', dominating how identities are classified (Bickle et al., 2011). Although the LBK is the focus of discussion here, the limited consideration of embodied identities could apply more widely across studies of the Neolithic. Sometimes such classes are applied directly to certain individuals (see below), but largely they act as disembodied ideals which are then used to explain the archaeological data.

It is important to challenge these views of static identity classes, because (as for the examples cited below) they uncritically become part of the histories written for the LBK. To take an example, we can point to the contrasting ways males and females are handled in the burial assemblage. Male identities are often particular, oriented around status, while those for women are frequently generalized and symbolic. The 'hunter-warrior' burial from Schwanfeld, an early LBK settlement in northern Bavaria (Figure 1), is a male who died between the ages of approximately twenty-three and twenty-five (Lüning, 2011). He was buried beneath a settlement pit in the classic LBK style — crouched on his left-hand side, oriented with his head to the east and accompanied by a polished stone adze and a series of flint trapezes (Gronenborn, 2003; Lüning, 2011). The very early radiocarbon date from his skeleton, calibrated to 5560–5480 cal BC, has led to suggestions that he was the founder of the settlement (Gronenborn, 2003). Recently this was reinforced by an isotope study, that suggested that he had lived his early childhood away from the settlement (Knipper & Price, 2011). Despite, then, perhaps an early death before the age of twenty-five, this individual is

characterized by the high status grave goods around him: as an active warrior or hunter, important, dominant even, in his settlement.

Such imagery contrasts starkly with how the female sex has been characterized. Dominating amongst settlement rather than cemetery burials, women are often considered to have rather low status (van de Velde, 1979a, 1979b; Veit, 1993, 1996; Jeunesse, 1997: 53; Hofmann, 2009). Female graves also give the impression of containing fewer and less high status grave goods, though this is largely because they tend not to have polished stone objects (Hedges et al., 2013: 378). When they do receive highly complex grave good assemblages, this is attributed to the social standing of the kinship group to which they belonged — a practice envisaged as playing a role in the creation of more wealthy lineages at the end of the LBK (van de Velde, 1979a: 114–15; Jeunesse, 1996, 1997: 145); being female in the LBK is thus to be a passive reflection of your social position, or rather that belonging to the males of your kinship group. For example, the burial pit at Talheim is thought to contain the victims from a nearby but unexcavated settlement, who had suffered at the hands of a raiding party (Wahl & König, 1987; Wahl & Trautmann, 2012). Young women were considered to be largely missing from the assemblage, the inference being that they had therefore been carried off as the spoils of the skirmish (Price et al., 2006; Bentley, 2007; Bentley et al., 2008). To emphasize the point, sex in narratives of the LBK has largely been characterized implicitly, rather than explicitly debated. More importantly, rather than considering how male and female identity was constructed or embodied, it is simply uncritically present in narratives. This is not to say that strong differences were not important to the lifeways of males and females during the LBK, rather to argue that limited discussion of embodied identities has had a reductive impact on identity classes possible for the LBK, at best leaving them as largely static and unchanging and at worst imposing modern gender narratives unthinkingly

onto the past (Meskell, 1996). In turn, this has reduced the explanatory range for tackling larger themes pertinent to both LBK research and beyond, such as the impact of the Mesolithic-Neolithic transition on health, subsistence specialization and the formation of social networks. How different would our thinking of the LBK expansion be if the stimulus for movement was not located in the hands of Schwanfeld warrior-type pioneers, but in distributed networks and the ways LBK sociality was enacted?

Fortunately, such static gendered identities are beginning to be challenged by a small but growing literature that draws more directly from anthropological and archaeological conceptions of embodied identity and personhood (e.g. Jones, 2005; Hofmann & Whittle, 2008; Hofmann, 2009, 2012). The neatly bounded LBK individual has been critiqued, drawing both on the tripartite longhouse form in metaphorical connection to the body (Jones, 2005; Whittle, 2012) and from the funerary context, emphasizing changing grave goods with age at death (Hofmann, 2009, 2012) and the potential access to skeletons after burial and during extended funerary rituals (e.g. the 'niche' burials identified in the Paris Basin: Thévenet, 2004, 2009; and evidence of skeletal manipulation: Boës, 2003). Above all, there has been increasing recognition, following the pioneering work of Sofaer Derevenski (1997), that reiteration through performance across the life-course is central to identity production and, as such, there is no reason to expect identities to be any more stable in the LBK than they have been at any other time (Grosz, 1994). In a very nice example from the cemetery at Aiterhofen, Hofmann (2012, in press) draws on Nieszery's (1995) insight that shell armrings must have been worn from childhood as they were too small to fit over the adult arm and thus, as Hofmann points out, would have created an embodied experience of age as the muscle and skin were restricted by and, in turn, grew to accommodate the object.

While re-casting identity production as embodied and potentially fluid over the life-course is a rich avenue to further exploring the social worlds of the LBK, there is a danger that static identities, divorced from the physical embodiment, are replaced with an equally static conception of fluidity, which loses touch with important culturally structuring elements of embodied experience (Brittain & Harris, 2010). In criticizing the stark male-female oppositions, we do not want to reify alternatives. As the correlation between the presence of certain grave goods in adult burials and strontium isotope ratios formed in childhood demonstrates, identity could have been embedded across the life-course, providing certain pathways through LBK life. In this paper, we try to mesh two approaches to the possible conceptions of childhood and aging: the association of burial practices and grave goods with different non-adult age groups in the LBK and a discussion of the forms of pathology recorded in the skeleton. We do not argue that the social is entirely constructed out of biology in a uni-directional interpretative move, but rather follow Sofaer (2004: 166) in arguing that changes to bodies, both developmental and those from outside – for example, changes to health or capacity via intensive training or violent intervention – are key sites for social engagement and elaboration and can thus inform on changing conceptions of identity over the life-course.

The Social Value of Children in the LBK: The Burial Record

The absence of children from studies of the LBK was first and most significantly challenged by Beate Siemoneit's (1997) study of child burials across the LBK, which showed demonstrably that individuals who died in childhood were marked in different ways to adults, rather than just receiving a low status burial at death (*cf*. Modderman, 1988; Veit, 1993, 1996: 188–9; Jeunesse, 1997: 53). Siemoneit (1997: 141) argued that children could have played an

active role in their communities from a young age, pointing to the regular occurrence of tools, particularly smaller versions of axes, in child graves, some as young as two or three years at death (Hofmann, in press). Siemoneit (1997: 37) also identified a pottery form that was found exclusively in child graves — a small beaker with holes just beneath the rim, positioned opposite each other, perhaps to aid use or to teach children how to use 'adult' vessels as their physical dexterity grew. Such objects suggest an acknowledged engagement with maturation. The recognition of growing and changing capacities suggests that preparation for adult life and the tasks that came with it may have begun at a young age, and Siemoneit (1997: 78) argues for a close relationship between play and learning in the LBK context. There is no reason to suppose that objects such as the pots or small axes were not made by children themselves (Sánchez Romero, 2004: 380): Greenfield (2001: 73) has shown that intensively-supervised teaching styles can give rise to comparatively little difference between adult- and child-made versions of objects, particularly in comparison to more independent trial-and-error learning.

In this vein, we can also point to the more idiosyncratic objects found in child graves, such as the very rare bone 'idols' or figurines that have been found at a cemetery in Alsace and in a settlement burial in the Paris basin (Berry-au-Bac, Aisne Valley: Allard et al., 1997; Ensisheim, Haute-Alsace: Jeunesse, 1997) (Figure 2), which have been interpreted in various ways (Siemoneit, 1997: 72; Sidéra, 2000: 145). While their intended use and whether the conception of 'toys' existed for the LBK are in many ways out of our reach, they nevertheless differ significantly from other forms of figurine found. These objects are only found associated with burials, which other figurines appear to be deliberately excluded from (with a few exceptions in the eastern distribution of the LBK; e.g. at Polgár-Ferenci hát: Anders, personal communication 2009). Made from bone rather than clay, the emphasis appears to

fall on the face- or eye-like shell additions, rather than elaborating other bodily features in an anthropomorphic or zoomorphic fashion (e.g. Höckmann, 1965; Lenneis, 1995). While it is interesting to note that Siemoneit (1997: 82) argues zoomorphic figurines were also toys, such bone objects together with the pottery contribute to a picture of LBK childhood as materialized both in different ways to adulthood and as a period of learning and development.

While treatment in death may not, of course, relate directly to identity during life, broader historical analogies have shown that the times of life where funerary rites alter do often correlate with changes over the life-course (Joyce, 2000). This is particularly the case with children. For example, in ancient Greece, children were not named until seven days had passed and formal mourning at death only began once a child had reached three years, and as their chances of survival into adulthood increased (Becker, 2011). Although not always tied to bodily changes, rites of passage during childhood are frequently associated with the physical development of the body and much attention has been given to the rites associated with puberty as marking the end of childhood and the beginning of adult life and responsibility (Lancy & Grove, 2011). However, as is attested anthropologically, a 'middle' childhood is also frequently marked from the age of about six or seven until the onset of puberty (Lancy, 2008; Lancy & Grove, 2011). The ages of seven to ten are unlikely to be associated with puberty, in fact this age range could have been markedly before it, with the fat rich diets of today thought to have significantly brought down the age at which puberty starts for girls — by as many as three to four months per decade over the last century by some estimations (Scott & Duncan, 1999). Yet the ages of about six and seven do see important physical changes — from about the age of six (approximately) the first permanent teeth begin to erupt (Hillson, 2005: 243), the body reaches adult proportions, there is a shift in cognitive reasoning (Gogtay et al., 2004) and there may be increased interest in sex and sex-play

(Lancy & Grove, 2011). Cross-culturally this is the time when gender increasingly determines the kinds of activities children engage in and play can be transformed into socially recognized work (Lancy, 2008; *cf*. Joyce, 2000). This is perhaps somewhat different to the examples from the ancient world, where emphasis on likelihood of survival appears to mark changes earlier in life (a recognition of potential).

Lancy and Grove (2011; Lancy, 2008) characterize the physical and mental developments that take place between the ages of about seven years and puberty as leading to children 'getting noticed'. It is not merely that their contribution to the community is recognized, however, but also that the investment (social, emotional, physical, etc.) of the community in raising the child is acknowledged (Carsten, 1995, 2004). Lancy and Grove (2011) argue that unlike puberty, middle childhood, though recognized, is rarely elaborated by ritual or public recognition. Rather, transition to middle childhood is more fluid, dependant both on a child's individual capacity and societal belief about development. For example, drawing on the Punan Bah's conception that children will only have the ability to reason from the age of five, when their souls stay put, Lancy and Grove (2011: 288) argue that from this point, caring for a child's well-being changes into greater concern with their contribution and learning, in which the child is expected to take part. Middle childhood is thus a process of acquirement, as the child becomes independent of the mother and takes on a more active involvement in the tasks of the broader household or community (Lancy & Grove, 2011).

Siemoneit (1997) argued that LBK children also passed through an age threshold at about seven years old, marked in the burial assemblage for a number of years, before a reduction in grave goods in adolescence. While the exact ages at which developmental maturation is acknowledged is likely to vary extremely between cultures, the social

acknowledgement of a series of developmental stages in the LBK context seems probable given Siemoneit's (1997) study. Building on the idea of a middle childhood, we wanted to explore variation throughout childhood through the burial record. For the purposes of the current discussion, we chose here to focus on three aspects of the funerary sphere: the presence of children in funerary contexts, the changing frequency of furnished graves during childhood, and the orientation of the graves. The dataset was compiled from the published literature, reaching a total of over 3000 burials. However, only burials where specific ages or age-ranges were provided were included in this study, reducing the number of infants, juveniles and adolescents from over 1000 to 494 burials. Some caution must still be taken with this reduced dataset because it combines individuals aged using different osteological methodologies or, in some cases, the techniques used were not stated. Furthermore, we acknowledge that this assemblage does not account for children found in more unusual settings, such as mass graves (Meyer et al., 2004), nor does it discuss the cremated remains which are thought to account for 10 per cent of the burial record (Trautmann, 2007:11).

The mortality profiles at settlements and cemeteries show the same pattern of lower numbers of the youngest individuals (neonates through to one year at death), increased numbers beyond the age of about seven or eight and a reduction for those who are likely to be at or beyond puberty (Table 1). However, when compared in terms of absolute frequency, the youngest individuals make up only 1 per cent of all burials at cemeteries (eleven of approximately 800 total burials), but 5 per cent of those at settlements (twenty-three from approximately 460 total burials). Determining an expected population for LBK burial contexts is challenging and it is likely that preservation issues do influence the numbers recorded here. High child mortality, especially in infants, would be expected for such prehistoric contexts and we can suggest that settlement burials are closer than cemetery

burials to representing a realistic mortality profile. However, both contexts seem to see some degree of selection, with the likelihood of a child being buried at death (and therefore reaching the burial assemblage) increasing up to about the age of twelve, with the eight to twelve age range the largest category in both contexts (Table 1).

Children are more frequently part of double or multiple burials than adults (Siemoneit, 1997: 96; Hofmann, in press). In our assemblage, while children are found in single burials fairly frequently at settlements, with the notable exception of Otzing, Lower Bavaria (Schmotz, 2001; Hofmann, 2009), at cemeteries these double burials are particularly noticeable, particularly in the case of neonates. Amongst the LBK lifeways assemblage, three occurrences of neonates with adult females in double burials are noted, at Aiterhofen (grave 116; Nieszery, 1995: 83), Kleinhadersdorf (grave verf. 5, Neugebauer-Maresch & Lenneis, in press) and Mulhouse-Est (grave 15, Schweitzer & Schweitzer, 1977: 47). The increased likelihood of being buried, and buried independently, from the age of around eight, chimes well with the model of middle childhood proposed above.

Table 2 depicts the rate of furnished and unfurnished child graves at settlements and in cemeteries. Overall 50 per cent of all settlement burials are furnished and about 70 per cent of those from cemeteries were accompanied by grave goods (Hamilton et al., 2013). The frequency of furnished child graves does not remain constant, but it also shows only a slight deviation from this pattern. When we analysed the orientation and body position of children in graves, we could identify a trend in which children increasingly became more likely to be buried oriented in a direction unusual for their place of burial as they aged, though when broken down by burial context the trend is less clear-cut (Table 3). At cemeteries, children are more than twice as likely as adults to be found in the opposite orientation to that dominating at the site (Hedges et al., 2013), a trend which is particularly marked from the age of

approximately seven, and at settlements those who died between eight and twelve were most frequently placed in an antipodal position (Table 3). In contrast to Bronze Age cemeteries from central Europe, where orientation and body position can be strongly sex determined, with male and female graves aligned in opposing directions (Stig Sørensen, 2004: 334), in the LBK a pattern of dominant and antipodal orientations is found, in which regional variation rather than sex appears to be the dominant determinant (Hedges et al., 2013). Jeunesse (1997) has suggested that the antipodal orientations may have represented the inclusion of hunter-gatherers in the LBK and numerous other suggestions could also be put forward, including perhaps differentiations between 'good' or 'bad' deaths, kinship and other community affiliations or social status.

That death in the years leading up to puberty, at a time when children were 'getting noticed', should increasingly be marked by being buried suggests that increased engagement with and by the broader community was significant to LBK groups. However, the increased likelihood of being buried in an antipodal position at this time in childhood is harder to explain. Perhaps the importance of burial as a public or community ritual is relevant here — children were still afforded burial rites that were also appropriate for adults, but as their number and type of social relationships to the broader community did not take the form of fully grown adults, this resulted in the greater potential for altered status at death.

Health, Disease and Ageing

Now we turn to the second question addressed in this paper: that of variation in health in LBK childhood. Although based in biological processes that are widely shared across different groups, health and illness are, of course, culturally constructed concepts often embedded in how the physical body is conceived and experienced. One need not look beyond

our own culture for specific examples in which illness can become bound up with moral and emotional statements about the body and its care. In examining the health of past populations and the types and frequency of certain diseases, we are interested in how they impacted on the physical and social capabilities of an individual (Larsen, 1997; Dawson, 2002). That is not to say, however, that health and disease are always conceived of as located within the physical body itself, or that what one culture classes as illness is recognized as such in another (e.g. Fadiman, 1997). It is also important to bear in mind that osteologically it can be difficult to assess children for pathological changes due to lack of preservation and faster remodelling of certain skeletal changes of disease (Fibiger, 2009). In addition, the crude prevalence is likely to underestimate the actual frequency of occurrence in the non-adult population, but there are some statements we can make about the experience of health, illness and aging in the LBK. The dataset discussed below is published in full in Bickle and Whittle (2013, passim, Hedges et al. 2013: 370–372), but the discussion also draws on the conclusions from Fibiger (2009, 2012, 2014; Fibiger et al., 2013). In the former study, osteological features that informed on the lifeways of individuals formed the major focus, including indicators of stress such as *cribra orbitalia* and enamel hypoplasia, which, alongside dental caries, can contribute to understanding diet (Hamilton et al., 2013). Evidence for cranial and post-cranial trauma was also investigated, providing information about activity rates and, in the case of cranial trauma, participation in or experience of violence (Fibiger, 2009, 2012, 2014; Fibiger et al., 2013).

The rates of enamel hypoplasia and *cribra orbitalia* differed between the sexes. Enamel hypoplasia — an indicator of stress and possibly malnutrition during the time of tooth formation, i.e. childhood, (Hillson, 2005: 169; Roberts & Manchester, 2005: 75–76) — was relatively evenly distributed between the sexes. *Cribra orbitalia* — a stress indicator

pointing towards anaemia and potential iron deficiency in the diet (Roberts & Manchester, 2005: 226) — was common only in females, adolescents and juveniles, with just one site (Rutzing, Upper Austria) presenting examples from male skeletons (Hedges et al., 2013). Although these pathologies do not record the same forms of dietary stress, the difference in frequency between enamel hypoplasia and *cribra orbitalia* could perhaps suggest that in early infancy sex-based differences (that were to appear later into childhood) were not emphasized. Caries rates were also higher in the female population analysed (Hedges et al., 2013) and although hormones are thought to influence sex-based differences in the health of teeth (Hillson, 2005; Lukacs, 2008), currently this pattern is best explained through different rates of carbohydrate consumption by men and women, with an increased consumption of a plant-based diet for females (Larsen et al., 1991; Hedges et al., 2013). Gender could have become increasingly stressed through childhood, as children became able to take part in tasks that were sex appropriate (Joyce, 2000). We can perhaps connect these differences to the onset of a middle childhood; perhaps as children were weaned, sex increasingly contributed to the type of diet consumed, eventually reflected in higher caries rates for females.

Amongst our dataset, further pathologies were present, suggesting that childhood was a time of stress, particularly from inadequate diet. Possible cases of scurvy were present on young individuals, often between the ages of one and four (Hedges et al., 2013). The condition is caused by a diet that is deficient in vitamin C, usually a dietary lack of fresh fruit and vegetables, over an extended period and one of its major symptoms, an increased tendency to haemorrhage, is recorded in the skeleton through increased bone surface porosity and new bone formation at the affected areas (Weston, 2008). Evidence from the stable isotope data from the LBK lifeways suggests that weaning was taking place around three years of age, but this is difficult to determine directly from isotope values due to varied rates

of bone turnover between individuals (Oelze et al., 2011: 277). The weaning period can often be a rather dangerous time for children, with increased risk of infection and illness and the time at which it took place could have been very varied amongst early farming populations (Katzenberg et al., 1996). One young infant of three to six months at death from the cemetery at Nitra, burial 55, may have suffered from rickets (which is caused by a deficiency of vitamin D in the diet) as is indicated by a bowing deformity of the ulna (Whittle et al., 2013). Inadequate diet would have differentially influenced the development of the child, with poor health possibly leading to differential growth rates and physical capacities carried into adulthood. In this way, the health of the body could have become bound up with personal biographies later on in life.

As well as risk from illness, children could also be the subjects of violence (Fibiger, 2009, 2014). Amongst the dataset discussed here, women and children dominate amongst the cases of cranial trauma (Hedges et al., 2013; Fibiger, 2014), which is a good indicator of violent action as it is often the target, with the head a primary locale of identity. Cranial trauma also offers less ambiguous evidence of violence, than the more difficult interpretation of post-cranial trauma (Fibiger, 2009, 2014; Fibiger et al., 2013). Again at the cemetery of Nitra, two of the youngest children to be identified with cranial trauma died aged between four and five years, and five and six years (Whittle et al., 2013) (Figure 3). They were buried together, alongside a possible adult female, whose right arm had been placed over the central child so that her hand was resting against the skull of the other (Pavúk, 1972: 25). There is currently no evidence to suggest the adult they were buried with also suffered from violence. It may not be appropriate to assume they were passive victims — the range of skills necessary for adulthood may have also included learning combat, with activities such as

hunting, mock-fighting and participation in defence or raiding (Knauft et al., 1987; Fibiger, 2009, 2014).

In a study of non-adult human remains from Neolithic Germany (defined as 5500–2200 BC), Fibiger (2014: 132) found a significant increase in the prevalence of head trauma between the ages of eight and twelve when compared with birth to eight years and twelve to seventeen age groups (Fisher's exact test, $p < 0.05$, $n = 13$). Perhaps, this period of increased trauma hints at initiation rites associated with combat (Knauft et al., 1987). This is the same age-range with the higher frequency of antipodal orientations of the body in the grave (as identified above), as well as covering the period of a possible middle childhood. Most of the younger individuals with identified unhealed traumas were interred in rarer burial contexts such as at settlements or, as is the case with the two young children with cranial injuries from Nitra, in multiple burials, suggesting an extension of the pattern of the rarer funerary rites already afforded to children dying at this age (Fibiger, 2014: 138). These data suggest a contrast to a more developmental childhood model, whereby the individual progresses slowly towards adulthood (Pawleta, 2004: 187), suggesting both an engagement with childhood as ongoing maturation, but also as distinct from adulthood.

Conclusion

Engaging with concepts of childhood can contribute to breaking down some of the more rigid identity categories that have characterized writing about the LBK. There has been a tendency for idealized social actors, such as 'household', 'male' and 'female', to dominate models of cultural organization in the LBK, as well as the networks envisaged as driving forces behind social change. Our aim was to contribute to exploring notions of identity in terms of both its presentation at death and the bodies through which it was experienced. This is not to argue

that the physical body and identity are one and the same, but rather to place centrally the strategies with which the body was mediated and transformed over the life-course. Through the lens of the funerary record, it is possible to show that the processes of maturation were influencing the treatment of children in burial, in ways that suggest aging was socially valued in identity production. The recognition of a middle childhood can be seen through grave goods and possibly also in the increased likelihood of being buried and in the chosen orientations of the body in the grave.

The study of the health of the child population in the LBK suggests that, at a population level, stress during childhood due to inadequate diet could have been a fairly common experience, though the LBK lifeways project did find some regional differences (Hedges et al., 2013). Such stress might have had implications for growth rates and physical capabilities in later life for some individuals. Dietary differences between the sexes may have also begun fairly early in life, leading to different rates of oral health between males and females amongst the adult population. Based on a selective osteological study, this account can only be a small contribution to investigating levels of health, but it encourages us to suggest that greater attention should be paid to how health varied over the life-course and between the sexes in prehistory more generally. Tackling embodied approaches to prehistoric societies can therefore benefit from contextualized analysis of the skeletal assemblage – in fact it remains essential to challenging some of the idealized representations of broader identity themes, such as ‘male’ or ‘female’, ‘child’ and ‘adult’ that persist (Sofaer Derevenski, 1997; Díaz-Andreu et al., 2005). The social and physical body is in a constant state of change, of being worked at, and – although sharing many stages of biological development – how such changes are characterized is likely to vary culturally (Kamp, 2001). The challenge, which we are not alone in identifying (Sofaer, 2000; Agarwal & Glencross, 2011), is how

these dynamic processes of ongoing change over the life-course from the archaeological and osteological remains of prehistoric cultures are captured.

Overall, we argue here for the recognition of a possible period of 'middle childhood' in the LBK, but one which did not begin or end at the same time for every individual, based to a greater extent on capacity of the individual child than on chronological age. These data suggest that childhood was marked in the burial record in changing ways from birth to adolescence. Some of the child-associated grave goods suggest an active engagement with the process of maturation — of growing and learning into adulthood. Yet, in contrast, the orientation of the graves and bone figurines suggest that childhood was also a time that could be marked in different ways. Perhaps alongside recognition of aging as a process, the precariousness of childhood also played a role in how the death of a child was responded to through ritual and funerary performances.

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Figure captions

FIGURE 1 Map of LBK distribution and sites mentioned in the test, showing early (darker shading) and later (lighter shading) phases. 1) Berry-au-Bac; 2) Mulhouse-Est; 3) Ensisheim; 4) Talheim; 5) Schwanfeld; 6) Aiterhofen; 7) Otzing; 8) Rutzing; 9) Kleinhadersdorf; 10) Nitra; 11) Polgár-Ferenci hát. After Jeunesse (1997: 10, fig. 1) and Bickle & Whittle (2013: 1, fig.1.1).

FIGURE 2 The two figurines made from animal bones found in grave 607, Berry-au-Bac Le Vieux Tordoir.
After Sidéra (2000: 144, fig. 29)

FIGURE 3 Peri-mortem fracture of occipital, burial 49 (5–6 year old), Nitra, Slovakia.
From Whittle et al. (2013: 148, fig. 4.31). Photo: Linda Fibiger.

TABLE 1
THE FREQUENCY OF CHILD BURIALS IN LBK CONTEXTS

		Age Range					Total
		0–0.99 year	1–3.99 years	4–7.99 years	8–11.99 years	12–17 years	
Cemetery	Count	11	59	60	72	43	245
	%	*4%*	*24%*	*24%*	*29%*	*18%*	*100%*
Settlement	Count	23	48	53	63	28	215
	%	*11%*	*22%*	*25%*	*29%*	*13%*	*100%*
Total		38	121	120	141	74	494

TABLE 2
THE FREQUENCY OF FURNISHED AND UNFURNISHED CHILD GRAVES BY BURIAL CONTEXT IN THE LBK

			Age Range					Total
			0–0.99 year	1–3.99 years	4–7.99 years	8–11.99 years	12–17 years	
Cemetery	Furnished	Count	5	42	40	49	33	169
		%	*45%*	*71%*	*68%*	*68%*	*77%*	*69%*
	Unfurnished	Count	6	17	19	23	10	75
		%	*55%*	*29%*	*32%*	*32%*	*23%*	*31%*
	Total	Count	11	59	59	72	43	244
Settlement	Furnished	Count	14	27	24	26	15	106
		%	64%	59%	46%	43%	56%	51%
	Unfurnished	Count	8	19	28	34	12	101
		%	36%	41%	54%	57%	44%	49%
	Total	Count	22	46	52	60	27	207

TABLE 3
THE FREQUENCY OF CHILD BURIALS IN DOMINANT AND SECONDARY ORIENTATIONS AT CEMETERIES AND SETTLEMENTS

		Age Range					Total
		0–0.99 year	1–3.99 years	4–7.99 years	8–11.99 years	12–17 years	
Cemetery	Dominant	5	21	19	27	15	87
	Secondary	4	28	31	36	24	123
Total		*9*	*49*	*50*	*63*	*39*	*210*
Settlement	Dominant	6	20	19	16	10	71

Secondary	4	11	9	22	3	49
Total	*10*	*31*	*28*	*38*	*13*	*120*